



Colchester 5/11/2021

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Connecticut Green Bank



Help ensure Connecticut's energy security and community prosperity by realizing its environmental and economic opportunities through clean energy finance and investments.



Support the Governor's and legislature's energy strategy to achieve cleaner, cheaper and more reliable sources of energy while creating jobs and supporting local economic development

Less work. More benefits. Now even easier for towns and cities.

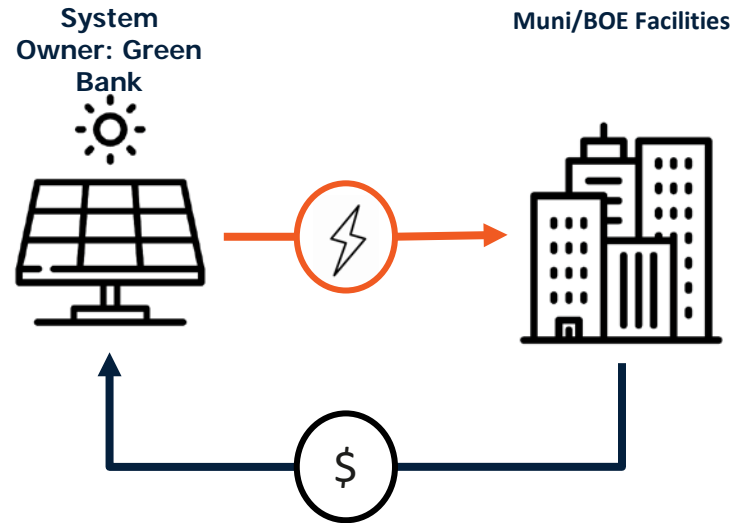
- Makes it even easier for municipalities to access renewable energy and achieve energy savings using the Green Bank Solar PPA
- Provides technical assistance support that simplifies every step of the process





- 1 Engage.** The SolarMAP team will meet with you to understand your municipality's goals, **gather information** and identify key participants, and explain the SolarMAP process in more detail.
- 2 Design.** Using the information you provide, the SolarMAP team will perform analysis of municipal sites, review energy demand, and **develop system designs**.
- 3 Review.** After you review the system designs, the SolarMAP team will **secure the utility incentives** (ZRECs) needed for each project and **solicit proposals** from qualified solar contractors and select the best proposal.
- 4 Execute.** Once a proposal has been selected and incentives secured, the SolarMAP team will work with you to **execute the PPA** and begin construction of the solar project(s).

What is a Power Purchase Agreement (“PPA”)?



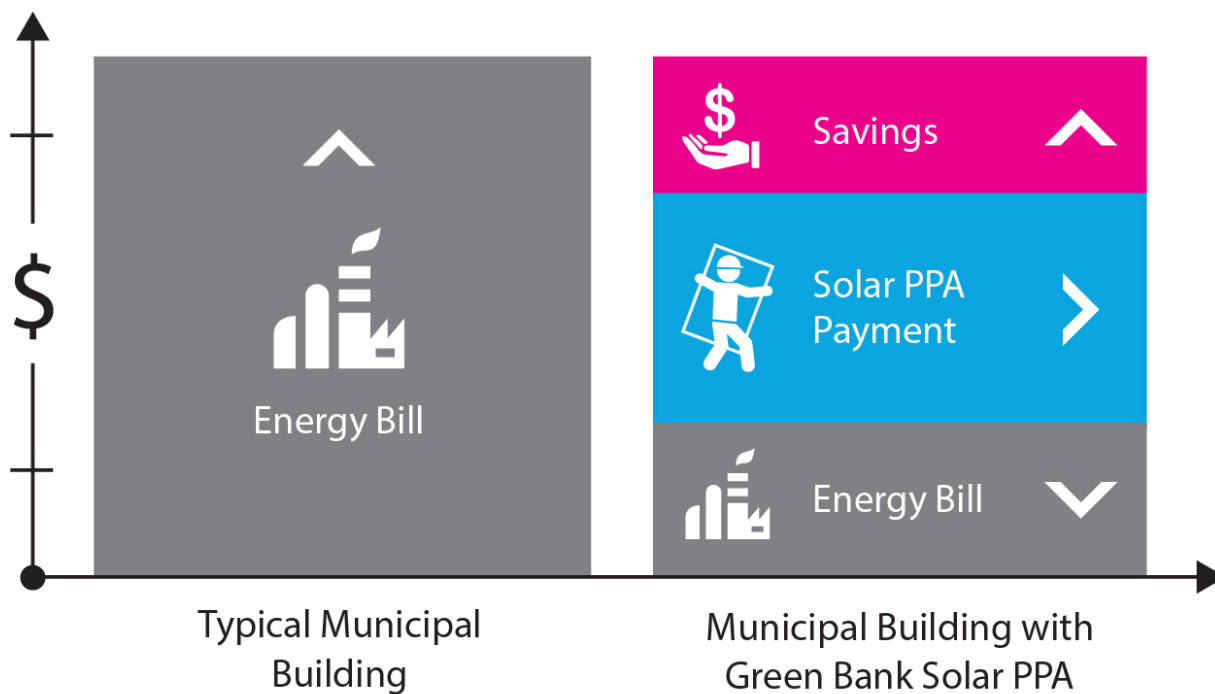
Contract between Seller (generates electricity) and Buyer (purchases electricity)

Green Bank is Seller:
Oversees development, construction, & asset management

Municipality is Buyer:
Purchases electricity from solar installed on property

What are the Benefits of a PPA?

The value of solar PV comes from electricity cost savings!



What are the Benefits of a PPA?

No upfront costs

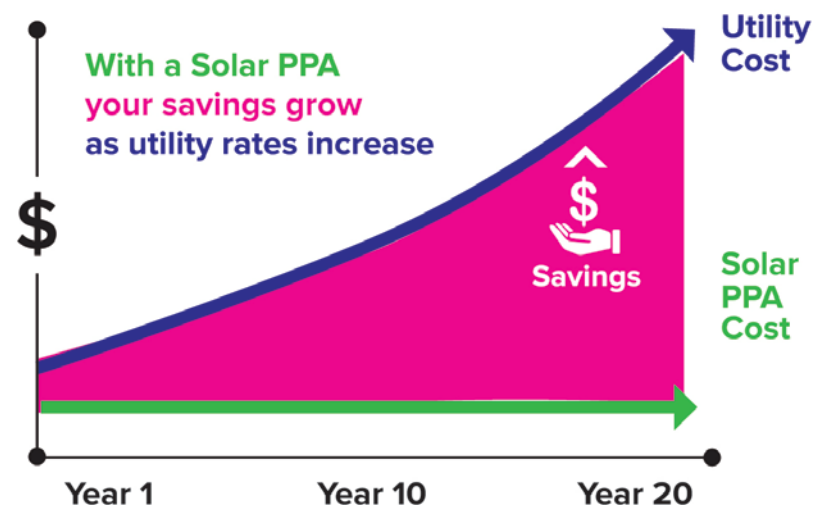
Lock in low electricity rate

Positive cash flow

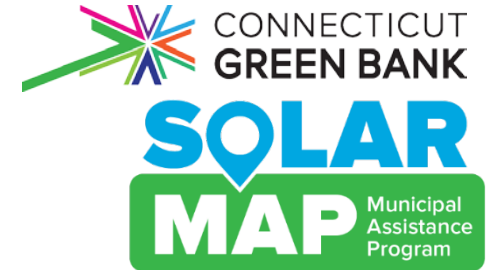
No operations & maintenance costs

Preserve capital & credit lines

Managed by a third-party solar system owner



Round 1 Results



5

Municipalities

16

Projects in Total

3.5

Megawatts (dc) of Solar

22% -
59%

**Year 1 Discount from
Current Utility Rate**

\$4

Million in Term Savings

Colchester

Colchester Elementary School



| Project Details | |
|--|-----------|
| Project size (kW DC) | 452.6 |
| Estimated Annual Production (kWh) | 524,950.8 |
| Effective Utility Rate | \$0.085 |
| Savings Feasibility | |
| Met preliminary 10% discount threshold | Yes |
| % Solar Offset to Utility | 73% |



Colchester Elementary School

Minimum Savings



| Savings | |
|---|------------|
| Term Savings | \$ 257,799 |
| Average Annual Savings | \$ 12,890 |
| First Year Savings | \$ 4,420 |
| <i>Operations & Maintenance Cost Included</i> | |

| Model and Finance Assumptions | |
|---------------------------------|--------------|
| System Size kW | 453 kW |
| Solar Energy Generated | 524,951 kWh |
| Annual Solar System Degradation | 0.64% |
| Solar Energy PPA Price | \$0.076 /kWh |
| Solar Energy Escalator | 0.00% |
| Utility Energy Price | \$0.084 /kWh |
| Utility Energy Escalator | 2.00% |

W.J. Middle School



| Project Details | |
|--|---------|
| Project size (kW DC) | 519.9 |
| Estimated Annual Production (kWh) | 602,913 |
| Effective Utility Rate | \$0.085 |
| Savings Feasibility | |
| Met preliminary 10% discount threshold | Yes |
| % Solar Offset to Utility | 85% |



W.J. Middle School

Minimum Savings



| Savings | |
|---|------------|
| Term Savings | \$ 296,086 |
| Average Annual Savings | \$ 14,804 |
| First Year Savings | \$ 5,077 |
| <i>Operations & Maintenance Cost Included</i> | |

| Model and Finance Assumptions | |
|---------------------------------|--------------|
| System Size kW | 520 kW |
| Solar Energy Generated | 602,913 kWh |
| Annual Solar System Degradation | 0.64% |
| Solar Energy PPA Price | \$0.076 /kWh |
| Solar Energy Escalator | 0.00% |
| Utility Energy Price | \$0.084 /kWh |
| Utility Energy Escalator | 2.00% |

Jack Jackter Intermediate



| Project Details | |
|--|---------|
| Project size (kW DC) | 333.3 |
| Estimated Annual Production (kWh) | 381,183 |
| Effective Utility Rate | \$0.085 |
| Savings Feasibility | |
| Met preliminary 10% discount threshold | Yes |
| % Solar Offset to Utility | 58% |



Jack Jackter Intermediate

Minimum Savings



| Savings | | |
|---|----|---------|
| Term Savings | \$ | 187,196 |
| Average Annual Savings | \$ | 9,360 |
| First Year Savings | \$ | 3,210 |
| <i>Operations & Maintenance Cost Included</i> | | |

| Model and Finance Assumptions | | |
|---------------------------------|----|--------------|
| System Size | kW | 333 kW |
| Solar Energy Generated | | 381,183 kWh |
| Annual Solar System Degradation | | 0.64% |
| Solar Energy PPA Price | | \$0.076 /kWh |
| Solar Energy Escalator | | 0.00% |
| Utility Energy Price | | \$0.084 /kWh |
| Utility Energy Escalator | | 2.00% |

Minimum Savings



Based on conservative preliminary 10% discount

| Colchester | First Year Savings | Term Savings |
|--------------------------------|--------------------|-------------------|
| Colchester Consolidated School | \$ 4,420 | \$ 257,799 |
| WJ Middle School | \$ 5,077 | \$ 296,086 |
| Jack Jackter Intermediate | \$ 3,210 | \$ 187,196 |
| Total | \$ 12,707 | \$ 741,081 |

Next Steps and Timeline



| | |
|--|----------------------------|
| Initial meetings | January 2021 |
| Project Development & Project list finalized | Q1 2021 |
| Sign Letter of Intent and incentive paperwork | May 2021 |
| Submit projects for Utility incentives (ZRECs) | June 14 th 2021 |
| RFP for Contractors | Fall 2021 |
| Execute PPA | Q4 2021 |
| Construction Start | Q1 2022 |



Questions?

Thank you!

Contact:

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<https://www.ctgreenbank.com/solarmap-townsandcities>

Appendix

Green Bank Solar PPA

BOEs and Municipal



- Ashford
- Bethany
- Bloomfield
- Branford
- Bridgeport
- Chaplin
- Coventry
- Darien
- Deep River (regional)
- Eastford
- Easton
- Ellington
- Essex
- Fairfield
- Falls Village
- Hampton
- Harwinton (regional)
- Lebanon
- Manchester
- Mansfield
- New Fairfield
- New Haven
- Newtown
- Orange
- Portland
- Ridgefield
- Salisbury
- Union
- Voluntown
- Woodbridge

Town of Coventry: Green Bank Solar PPA Case Study



- 8 solar PV systems (over 580 kW) financed with the Green Bank Solar PPA
- Includes Town Hall, Police Headquarters, Radio Tower Annex, and five Board of Education buildings including schools and warehouse space
- Six roof mounted solar PV systems and two carport solar PV systems



Desktop Review (first look)

Town of Colchester



4 / 4
Passed / Total Sites

| Site Name | Site Address | Can the roof: fit a 50kWac installation? >>> | Is the roof free from: roof pitches, HVAC units, etc. that could inhibit a solar installation? | Is the roof free from: any impact from tree shading, other buildings, etc.? | <<< If the roof is not viable: any potential for a ground-mount and/or carport installation? | Results from: Roof Size Obstructions Shading Ground/Carport | Utility bill review: does the site have the minimum kWh usage to meet the program system size requirements? |
|-----------------------------------|---|--|--|---|--|--|---|
| Site Name | Site Address | Roof Size | Roof Obstructions | Shading | Ground or Carport | CSW Desk Review | CSW Usage Review |
| Colchester Elementary School | 315 Halls Hill Rd, Colchester, CT 06415 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Pass | TBD |
| William J. Johnston Middle School | 360 Norwich Ave, Colchester, CT 06415 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Pass | TBD |
| Jack Jackter Intermediate School | 215 Halls Hill Rd, Colchester, CT 06415 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Pass | TBD |
| Bacon Academy | 611 Norwich Ave, Colchester, CT 06415 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Pass | TBD |

No
Yes

| |
|-------------------------------------|
| <input type="checkbox"/> |
| <input checked="" type="checkbox"/> |

Program Benefits

-  Trusted partner in the CT Green Bank, a quasi-state agency
-  Take advantage of the final year of the utility incentive program
-  Group your town's projects with other participating towns to receive competitive pricing
-  Support from start to finish developing any projects you choose to move forward with